

### **AMENDMENTS TO THE CLAIMS**

Please **AMEND** claims 1, 4, and 11 as shown below.

This listing of claims will replace all prior versions and lists of claims in the application.

1. (Currently amended) An apparatus for providing inter-processor communication using transmission control protocol/Internet protocol in a communication system, the apparatus comprising:

an Ethernet interface module providing an interface between an Ethernet device driver and an inter-processor communication module, determining a type of a received message, transmitting the message when the determined type of the message is ~~non-frame data~~ a first message, queuing the message in a first mailbox corresponding to ~~frame data~~ a second message when the determined type of the message is the ~~frame data~~ second message;

a message process module receiving the message transmitted by said Ethernet interface module, queuing the message received from said Ethernet interface module in a second mailbox corresponding to the ~~non-frame data~~ first message; and

a common application programming interface module providing an interface for performing data transmission and reception through said message process module, for management of the first and second mailboxes, for inter-processor communication buffer management, and for an inter-processor communication control function, said common application programming interface module being in communication with said Ethernet interface module and said message process module.

2. (Original) The apparatus of claim 1, said message process module determining a number of messages queued in the second mailbox, deleting oldest messages from the second

mailbox, and queuing latest messages in the second mailbox when the number of messages is greater than a predetermined number of messages.

3. (Original) The apparatus of claim 1, said common application programming interface module, Ethernet interface module, and message process module communicating with each other in accordance with transmission control protocol/Internet protocol.

4. (Currently amended) A system providing inter-processor communication using transmission control protocol/Internet protocol, the system comprising:

an access network controller being coupled to an Ethernet network and operating in accordance with software instructions corresponding to 1x evolution-data only (1xEV-DO);

a wide area switching module being coupled to the Ethernet network and performing operation and state management;

a data location register being coupled to the Ethernet network, performing subscriber management and providing session information to said access network controller;

an element management system being coupled to the Ethernet network and performing operation and management of the Ethernet network and said data location register;

a server being coupled to the Ethernet network and performing authentication for a 1x evolution-data only (1xEV-DO) subscriber; and

an access network transceiver system transmitting 1x evolution-data only (1xEV-DO) data and ~~signalling~~ signaling data to said access network controller through the Ethernet network;

said access network controller performing a matching function with said access network transceiver system for a packet data service, and performing call processing corresponding to 1x evolution-data only (1xEV-DO);

said access network controller, wide area switching module, and element management system communicating with each other by transmission control protocol/Internet protocol through the Ethernet network;

at least one communication subsystem;

wherein the communication subsystem comprising

an Ethernet interface module providing an interface between an Ethernet device driver and an inter-processor communication module, the Ethernet device driver being communication with the Ethernet network. said Ethernet interface module determining a type of a received message, transmitting the message when the determined type of the message is ~~non-frame data~~ a first message, queuing the message in a first mailbox corresponding to ~~frame data~~ a second message when the determined type of the message is the ~~frame data~~ second message;

a message process module receiving the message transmitted by said Ethernet interface module, queuing the message received from said Ethernet interface module in a second mailbox corresponding to the ~~non-frame data~~ first message; and

a common application programming interface module providing an interface for performing data transmission and reception through said message process module, for management of the first and second mailboxes, for inter-processor communication buffer management, and for an inter-processor communication control function, said common application programming interface module being in communication with said Ethernet interface module and said message process module, the inter-processor communication module being selected from among said access network controller, said wide area switching module, and said element management system.

5. (Original) The system of claim 4, said server corresponding to an access network-authorization, authentication, accounting server providing system management, an operator interface, and a graphic user interface for maintenance.

6. (Original) The system of claim 5, the system corresponding to an Internet protocol based evolution-data only (EV-DO) system.

7. (Canceled).

8. (Original) The system of claim 6, said message process module determining a number of messages queued in the second mailbox, deleting oldest messages from the second mailbox, and queuing latest messages in the second mailbox when the number of messages is greater than a predetermined number of messages.

9. (Original) The system of claim 8, said common application programming interface module, Ethernet interface module, and message process module communicating with each other in accordance with transmission control protocol/Internet protocol.

10. (Original) The system of claim 9, the communication subsystem including software for transmitting and receiving the messages between application tasks in said access network controller, wide area switching module, and element management system.

11. (Currently amended) A method providing inter-processor communication using transmission control protocol/Internet protocol in a communication system, the method comprising:

operating an access network controller in accordance with software instructions corresponding to 1x evolution-data only (1xEV-DO), the access network controller being coupled to an Ethernet network, the access network controller performing call processing corresponding to 1x evolution-data only (1xEV-DO);

performing operation and state management with a wide area switching module coupled to the Ethernet network;

performing subscriber management with a data location register coupled to the Ethernet network, the data location register providing session information to the access network controller;

performing operation and management of the Ethernet network and of the data location register with an element management system coupled to the Ethernet network;

performing authentication for a 1x evolution-data only (1xEV-DO) subscriber with a server coupled to the Ethernet network;

transmitting 1x evolution-data only (1xEV-DO) data and ~~signaling~~ signaling data to the access network controller through the Ethernet network with an access network transceiver system, the access network controller performing a matching function with the access network transceiver system for a packet data service;

performing intercommunication between the access network controller, wide area switching module, and element management system by transmission control protocol/Internet protocol through the Ethernet network;

determining a type of a received message;

transmitting the message when the determined type of the message is ~~non-frame data~~ a first message;

queuing the message in a first mailbox corresponding to ~~frame data~~ a second message when the determined type of the message is the ~~frame data~~ second message;

said determining, said transmitting, and said queuing of the message in the first mailbox being performed by an Ethernet interface module provided between an Ethernet device driver and an inter-processor communication module, the inter-processor communication module being selected from among the access network controller, the wide area switching module, and the element management system, the Ethernet device driver being communication with the Ethernet network;

receiving the message transmitted by the Ethernet interface module at a message process module;

queuing the message received from the Ethernet interface module in a second mailbox corresponding to the ~~non-frame data~~ first message, said queuing of the message in the second mailbox being performed by the message process module; and

providing a common application programming interface module for performing data transmission and reception through the message process module, for management of the first and second mailboxes, for inter-processor communication buffer management, and for an inter-processor communication control function, the common application programming interface module being in communication with the Ethernet interface module and the message process module.

12. (Original) The method of claim 11, the server corresponding to an access network-authorization, authentication, accounting server providing system management, an operator interface, and a graphic user interface for maintenance.

13. (Original) The method of claim 12, the communication system corresponding to an Internet protocol based evolution-data only (EV-DO) system.

14. (Canceled).

15. (Previously Presented) The method of claim 11, further comprising:  
determining a number of messages queued in the second mailbox;  
deleting oldest messages from the second mailbox; and  
queuing latest messages in the second mailbox when the number of messages is greater than a predetermined number of messages, said determining of the number of messages queued in the second mailbox, said deleting of the oldest messages, and said queuing of the latest messages being performed by the message process module.

16. (Original) The method claim 15, the common application programming interface module, Ethernet interface module, and message process module communicating with each other in accordance with transmission control protocol/Internet protocol.